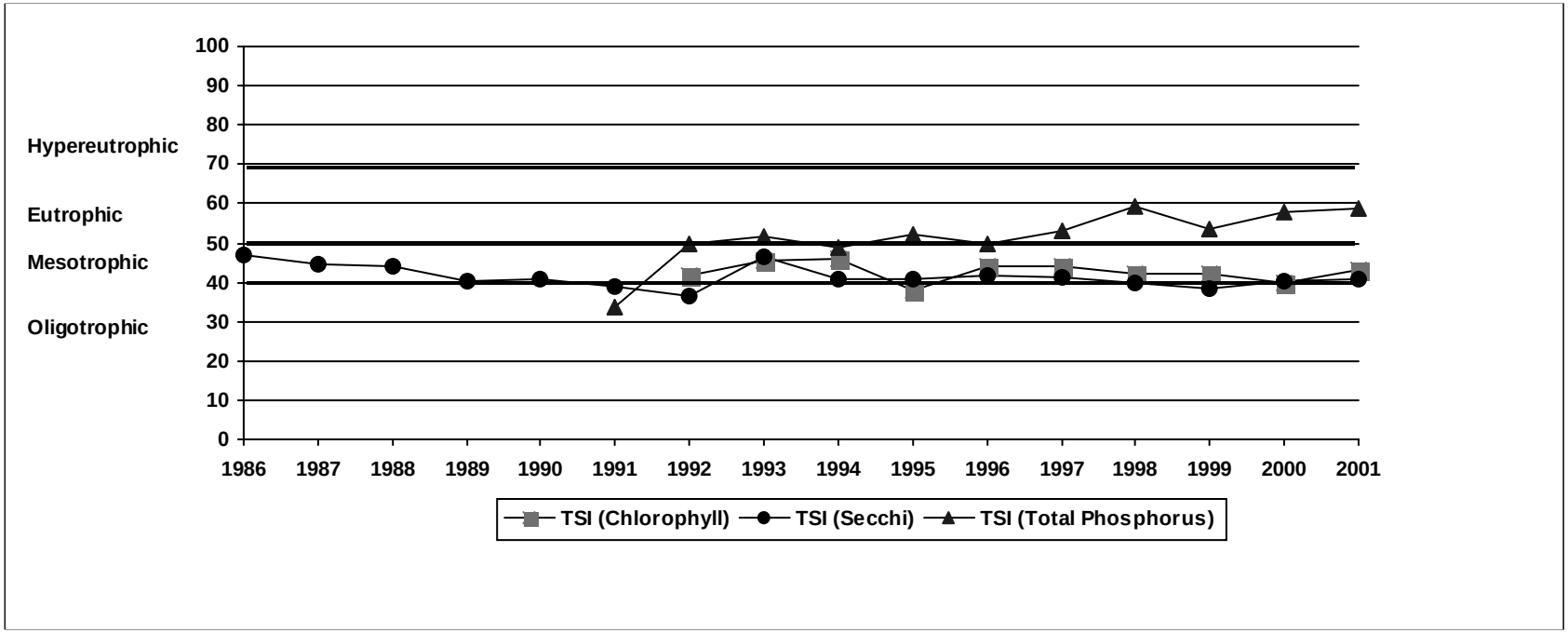
TROPHIC STATE INDEX GRAPH FOR GREEN LAKE, EAST BASIN, GREEN LAKE COUNTY

SUMMER AVERAGES (JUNE, JULY, AUGUST) FROM 1986 to 2001



Understanding Trophic State Index (T

The Trophic State Index is a scale that gives us an indication of how nutrient-enriched a lake is. The index can be calculated via. mathematical equations from Secchi depth, chlorophyll (the green pigment in algae) or phosphorus. The Trophic State Index ranges from 0-100 with lower values indicating nutrient-poor (oligotrophic) waters and higher values indicating more nutrient-rich (eutrophic) waters. The scale is continuous and Wisconsin's lakes range over much of the scale.

It is important to note that lakes naturally vary -- some lakes have always been nutrient-rich and full of plants and algae; others are naturally nutrient-poor. Lakes can change slightly over the year and from year to year because of weather and other natural cycles. Lakes naturally become more enriched over thousands of years as they age and eventually fill in with sediment and plants. What we don't want to see is a lake that is becoming noticably more eutrophic over several years -- if we can see a lake "age", it's most likely because of cultural (human-caused) eutrophication. Immediate action is needed to protect these lakes.

Trophic State Index Scale:

1-40	**Oligotroph**	Clear water; nutrient poor, few plants and algae. Oxygen rich at all depths, except if close to mesotrophic border, then may have low or no oxygen; coldwater fish likely in deeper lakes.
41-50	**Mesotrophic**	Moderately clear water, increased nutrients and more plants. Increasing chance of low dissolved oxygen in deep water during summer.
51 - 70	**Eutrophic**	Decreased water clarity; high nutrient levels, frequent algae blooms, lots of plants. Probably no oxygen in bottom waters during summer. Warm water fisheries only. Blue-green algae likely in summer in upper range of scale.
71-100	**Hypereutroph**	Heavy algal blooms throughout the summer; if >80, fish kills likely in summer and rough fish dominate.